PATENT
Attorney Docket No. UCSD-04871

AMENDMENTS TO THE CLAIMS

The following is a listing of claims that replaces all prior versions, and listings, of claims in the application:

1. (Previously Amended): An isolated nucleic acid sequence encoding a protein comprising amino acids 1 to 357 of SEQ ID NO:1.

Claim 2 (Currently Cancelled).

Claim 3 (Previously Cancelled).

4. (Currently Amended): An isolated nucleic acid sequence ~~of claim 1, wherein the nucleic acid encodes~~ encoding SEQ ID NO:1.

5. (Currently Amended): An isolated nucleic acid sequence ~~of claim 1, wherein the nucleic acid sequence has a~~ comprising nucleotide sequence of SEQ ID NO:2.

Claim 6 (Previously Cancelled).

7. (Currently Amended): ~~The~~ An isolated nucleic acid sequence ~~of Claim 1~~ encoding a protein comprising amino acids 1 to 357 of SEQ ID NO:1, said isolated nucleic acid sequence comprising sequence 5' GATATTTCCACCGCCCGACAT 3' (SEQ ID NO:8) that is complementary to 5' ATGTCGGGCGGTGGAAATATC 3' (SEQ ID NO:3), or comprising sequence 5' TGAAAACAGCGAAGCAGGAATTC 3' (SEQ ID NO:9) that is complementary to 5' GAATTCCTGCTTCGCTGTTTTCA 3' (SEQ ID NO:4), wherein said isolated nucleic acid sequence encodes a protein having plus end-directed microtubule motor activity.

8. (Previously Amended): The isolated nucleic acid sequence of Claim 1, wherein the nucleic acid is isolated from a hyphal fungus.

9. (Previously Amended): The isolated nucleic acid sequence of Claim 8, wherein said fungus is *Thermomyces lanuginosus*.

Claim 10 (Previously Cancelled).

11. (Previously Amended): An expression vector comprising the nucleic acid sequence of Claim 1.

Claim 12 (Currently Cancelled).

13. (Original) A host cell transfected with the vector of claim 11.

Claims 14-49 (Previously Cancelled).

50. (Previously Amended): An isolated nucleic acid sequence comprising nucleotides 1-1071 of SEQ ID NO:2.

51. (Previously Amended): An isolated nucleic acid sequence comprising nucleotides 1327-1803 of SEQ ID NO:2.

52. (Previously Amended): An isolated nucleic acid sequence comprising nucleotides 1804-2352 of SEQ ID NO:2.

Claim 53 (Previously Cancelled).

54. (Previously Amended): The nucleotide sequence of Claim 50, wherein said sequence encodes a protein having plus-end directed microtubule motor activity.

Claim 55-56 (Currently Cancelled).

Claims 57-58 (Previously Cancelled).

59. (Previously Added): The nucleic acid sequence of Claim 1, wherein the protein has plus end-directed microtubule motor activity.

Claim 60-63 (Currently Cancelled).

64. (Previously Added): An isolated nucleic acid sequence encoding a protein comprising amino acids 358 to 442 of SEQ ID NO:1.

Claims 65-67 (Currently Cancelled).

68. (Previously Added): The isolated nucleic acid sequence of Claim 1, wherein the encoded protein further comprises amino acids 358 to 442 of SEQ ID NO:1.

Claims 69-73 (Currently Cancelled).

74. (Previously Added): The isolated nucleic acid sequence of Claim 1, wherein the nucleic acid is amplified by primer set SEQ ID NO:5 and SEQ ID NO:6 or by primer set SEQ ID NO:5 and SEQ ID NO:7.

75. (Previously Added): The nucleic acid sequence of Claim 74, wherein the protein has plus end-directed microtubule motor activity.

76. (Previously Added): The isolated nucleic acid sequence of Claim 1, wherein the nucleic acid is amplified by the primer set:

5' ATGTCGGGCGGTGGAAATATC 3' (SEQ ID NO:3)

5' GAATTCCTGCTTCGCTGTTTTCA 3' (SEQ ID NO:4)

77. (Currently Amended): An expression vector comprising ~~the nucleic acid sequence of Claim 4~~ a nucleic acid sequence encoding SEQ ID NO:1.

78. (Currently Amended): A host cell transfected with ~~the vector of Claim 77~~ an expression vector comprising a nucleic acid sequence encoding SEQ ID NO:1.

79. (Currently Amended): An expression vector comprising ~~the nucleic acid sequence of Claim 63~~ a nucleic acid sequence encoding a protein comprising amino acids 602 to 784 of SEQ ID NO:1, wherein the protein has plus end-directed microtubule motor activity, and wherein the protein specifically binds to polyclonal antibodies to SEQ ID NO:1.

80. (Currently Amended): A host cell transfected with ~~the vector of Claim 79~~ an expression vector comprising a nucleic acid sequence encoding a protein comprising amino acids 602 to 784 of SEQ ID NO:1, wherein the protein has plus end-directed microtubule motor activity, and wherein the protein specifically binds to polyclonal antibodies toSEQ ID NO:1.

81. (Currently Amended): An expression vector comprising ~~the nucleic acid sequence of Claim 64~~ a nucleic acid sequence encoding a protein comprising amino acids 358 to 442 of SEQ ID NO:1.

82. (Currently Amended): A host cell transfected with ~~the vector of Claim 81~~ an expression vector comprising a nucleic acid sequence encoding a protein comprising amino acids 358 to 442 of SEQ ID NO:1.

Claims 83-88 (Currently Cancelled).